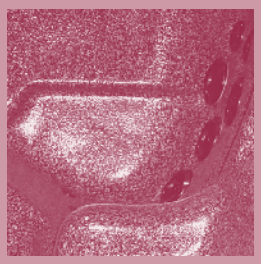
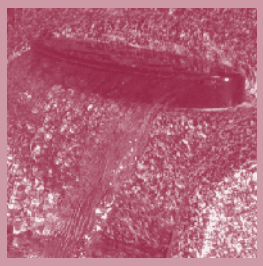
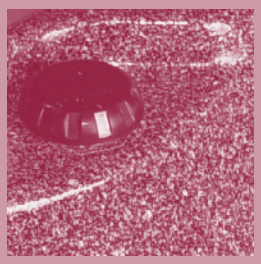






Owners Manual

International

engineered for the world's harshest climates...

(wherever you happen to live)

Congratulations!

Your choice of an **Arctic Spa** indicates that you are devoted to excellence. At **Arctic Spas®** we believe a good foundation is required to build a superior product, both in design and philosophy. Canadian built with the finest materials and advanced technology to withstand even the harshest of weather conditions, **Arctic Spas®** are made to perform... wherever you happen to live. To safely and effectively use your spa, we recommend that you take the time to read this manual before you hook-up and operate the spa. This guide will acquaint you with the operating features, hook-up procedures, and the maintenance and safety procedures, ensuring an enjoyable experience right from the start.

If you require additional information, please call your local **Arctic Spas®** dealer or check our website at www.arcticspas.com.

IMPORTANT!

In most cities and counties, permits will be required for the installation of electrical circuits or the construction of exterior surfaces (decks and gazebos). In addition, some communities have adopted residential barrier codes which may require fencing and/or self-closing gates on the property to prevent unsupervised access to a pool or (spa) by children under 5 years of age. Your Arctic Spa is equipped with a locking cover that meets the ASTM F1346-91 Standard for Safety Covers and as a result, is usually exempt from most barrier requirements. As a general practice, your local Building Department will inform you of any applicable barrier requirements at the time a permit is obtained for the installation of an electrical circuit. Your Arctic Spa Dealer can provide information on which permits may be required.

Contents

Important Safety Instructions **4**

Hyperthermia **6**

Installation Instructions **8**

Electrical Specifications **9**

Electrical Installation Instructions **10**

Startup Procedures **12**

Fusion™ Jetting System **13**

Venturi Controls **13**

Jets **14**

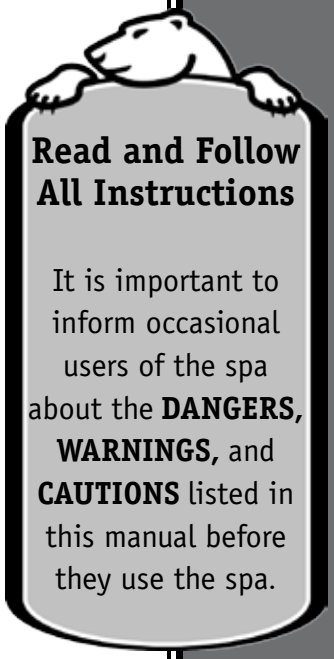
Topside Control Panel **15**

Spa Care and Maintenance **20**

Water Maintenance **24**

Common Spa Water Problems ~ Cause & Remedy **29**

Troubleshooting Spa Problems **30**


Read and Follow All Instructions
It is important to inform occasional users of the spa about the DANGERS, WARNINGS, and CAUTIONS listed in this manual before they use the spa.

CAUTION!	***DANGER!***	***WARNING!***
Indicates a situation in which damage to equipment or material may occur.	Indicates risk of injury.	Indicates information of critical importance.

Important Safety Instructions:

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

When installing and using this electrical equipment, basic safety precautions should always be followed, including:

1) **WARNING:** Do not use spa if power supply cable has been damaged.

2) **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

3) **WARNING:** A grounding wire connector is provided on this unit to connect a minimum 8.4 mm^2 solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 1.5m of the unit.

4) **DANGER:** Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this hot tub unless they are supervised at all times.

5) **DANGER:** Risk of Injury. The suction fittings in this hot tub are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the hot tub if the suction fittings are broken or missing. Consult your local dealer for assistance in choosing an appropriate replacement suction fitting.

6) **DANGER:** Risk of Electric Shock. Install at least 1.5m, from all metal surfaces. As an alternative, a hot tub may be installed within 1.5m of metal surfaces if each metal surface is permanently connected (bonded) by a minimum 6mm^2 solid copper conductor attached to the wire connector on the grounding lug, inside the equipment compartment on the equipment box.

7) **DANGER:** Risk of Electric Shock. All controls or devices accessible from the spa must be powered by a maximum of 12vdc. Do not permit any electrical appliances not powered by 12vdc or less within 1.5m of a hot tub.

8) **ELECTRICAL SUPPLY:** The electrical supply for this product must include a suitable circuit breaker to open all ungrounded supply conductors. The disconnect must be readily accessible and visible to the hot tub occupant but installed at least 1.5m, from the hot tub water.

9) **WARNING:** To Reduce the Risk of Injury:
a) The water in a hot tub should never exceed 40°C. Water temperatures between 38°C and 40°C are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when hot tub use exceeds 10 minutes.

IMPORTANT!
This manual was written to ensure the proper use and installation of any Arctic Spa. Any modifications to the procedures outlined may result in your warranty being voided. Please read this manual to avoid any unnecessary damage to your spa and equipment.

b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit hot tub water temperatures to 38°C. If pregnant, please consult your physician before using a hot tub.
c) Before entering the hot tub, the user should measure the water temperature with an accu rate thermometer since the tolerance of water temperature regulating devices may vary as much as +/- 2°C.
d) The use of alcohol, drugs, or medication before or during hot tub use may lead to uncon sciousness with the possibility of drowning.
e) Persons suffering from obesity or a medical history of heart disease, low or high blood pres sure, circulatory system problems, or diabetes should consult a physician before using a hot tub.
f) Persons using medication should consult a physician before using a hot tub since some medication may induce drowsiness, while other medication may affect heart rate, blood pres sure, and circulation.

10) A bonding lug bar is provided on the side of your spa pack to accommodate grounding of entire spa. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub to these terminals with an insulated or bare copper conductor not smaller than 8.4 mm^2.

11) All field-installed metal components such as rails, ladders, drains or other similar hardware within 3m of the hot tub shall be bonded to the equipment grounding buss with cop per conductors not smaller than 8.4 mm^2.

12) Use the hot tub straps and clip tie downs to secure the cover when not in use. This will help to discourage unsupervised children from entering the hot tub. There is no representation that the cover, clip tie downs, or actual locks will prevent access to the hot tub.

WARNINGS!

WARNING: Children should not use hot tubs without adult supervision.

WARNING: Do not use hot tubs unless all suction guards are installed to prevent body and hair entrapment.

WARNING: People with infectious diseases should not use a hot tub.

WARNING: To avoid injury, exercise care when entering or exiting the hot tub.

WARNING: Do not use drugs or alcohol before or during the use of a hot tub to avoid unconsciousness and possible drowning.

WARNING: Pregnant or possibly pregnant women should consult a physician before using a hot tub.

WARNING: Water temperature in excess of 38°C may be injurious to your health.

WARNING: Before entering the hot tub, measure the water temperature with an accurate thermometer.

WARNING: Do not use a hot tub immediately following strenuous exercise.

WARNING: Prolonged immersion in a hot tub may be injurious to your health.

WARNING: Do not permit electric appliances (such as light, telephone, radio, television, etc.) within 1.5m of this hot tub.

CAUTION: Maintain water chemistry in accordance with manufacturer's instructions.

WARNING: The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in hot tubs.

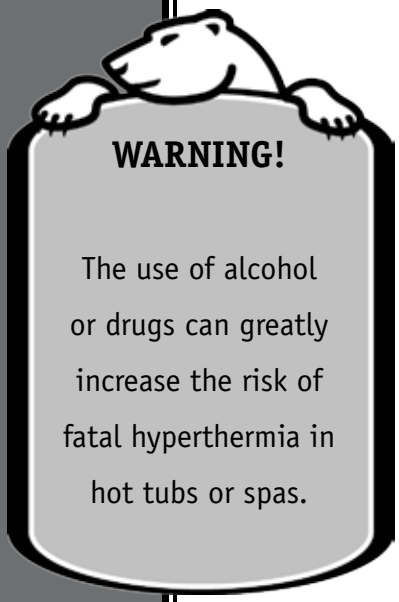
Warning: Do not use spa if power supply cable has been damaged.

Hyperthermia

Prolonged immersion in hot water may induce hyperthermia.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 37°C. The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- Unawareness of impending hazard;
- Failure to perceive heat;
- Failure to recognize the need to exit hot tub;
- Physical inability to exit hot tub;
- Fetal damage in pregnant women; and
- Unconsciousness and danger of drowning.



INTERNATIONAL SPA SPECIFICATIONS

	Outside Dimensions	Heights	Heater (Watts)	Water Capacity	Dry Weight	Filled Weight*	Weight per square meter	Electrical Requirements
Avalanche	92 3/4" x 92 3/4" 235 cm x 235 cm	38 3/4" 98 cm	3600	1855 Litres	386 Kg	3152 Kg	527 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Cub	85 3/4" x 85 3/4" 217 cm x 217 cm	34 3/4" 88 cm	3600	1325 Litres	340 Kg	2212 Kg	488 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Fox	85 3/4" x 68 3/4" 218 cm x 174 cm	38 3/4" 98 cm	3600	971 Litres	250 Kg	1292 Kg	341 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Frontier	85 3/4" x 92 3/4" 218 cm x 235 cm	38 3/4" 98 cm	3600	1513 Litres	308 Kg	1973 Kg	389 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Klondiker	92 3/4" x 92 3/4" 235 cm x 235 cm	38 3/4" 98 cm	3600	1514 Litres	386 Kg	2447 Kg	410 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Kodiak	92 3/4" x 92 3/4" 235 cm x 235 cm	38 3/4" 98 cm	3600	1582 Litres	386 Kg	2697 Kg	454 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Summit	92 3/4" x 92 3/4" 235 cm x 235 cm	38 3/4" 98 cm	3600	1476 Litres	386 Kg	2409 Kg	405 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Tundra	92 3/4" x 92 3/4" 235 cm x 235 cm	38 3/4" 98 cm	3600	2044 Litres	386 Kg	3160 Kg	532 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits
Yukon	85 3/4" x 85 3/4" 217 cm x 217 cm	34 3/4" 88 cm	3600	1374 Litres	340 Kg	2253 Kg	493 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuits

*Filled weight includes weight of water and maximum recommended number of people in the spa.

Installation Instructions

Site Preparation

Make sure you ensure the following:

- Always put your spa on a structurally sound, level surface. A filled spa can weigh a great deal. Make certain that the location you choose can support the weight of your filled spa.
- Locate your equipment compartment, which houses all of the electrical components, in a place where you will have easy access for periodic spa care and maintenance.
- Allow adequate access to all other doors for service.

Outdoor Ground Level Installation

No matter where you install your new spa, it's important that you have a solid foundation for support. If you are installing a spa with a wooden pedestal floor outdoors, we recommend you place patio stones underneath spaced out evenly. The stones should be at least two inches thick and twelve inches square (5 cm by 30 cm). Even with stones in place, the spa will possibly settle and become unlevel, and may require re-leveling over time. If you are installing a spa with a Forever Floor® outdoors, you may set it on virtually any surface, as long as it is level.

Deck Installation

To be certain your deck can support your spa, you must know the deck's maximum load capacity. Consult a qualified building contractor or structural engineer. To find the weight of your spa, its contents and occupants, refer to the Spa Specification chart. This weight per square meter must not exceed the structure's rated capacity, or serious structural damage could result.

WARNING! WARNING!
We recommend that the Arctic Spa be installed above ground. Consult a licensed building contractor to design or evaluate your custom decking requirements.

Electrical Specifications

WARNING!
All electrical hookups must be performed by a licensed electrician!

DANGER!

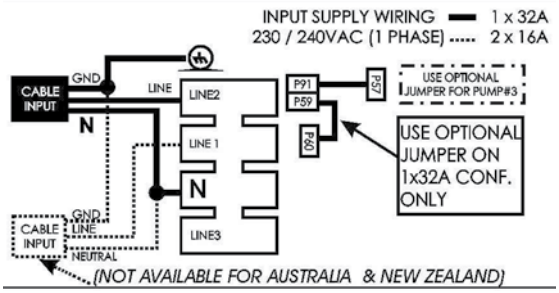
Shock Hazard.
DO NOT PROCEED if you are not a licensed electrician. This diagram is for reference only!

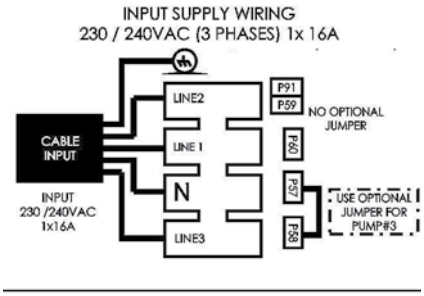
Power Input

All Arctic Spas® are tested for the following:

230 VAC, 50 Hz, 32 A (International)

Connect the power input wires to the terminal block labeled "AC-Input". Make sure to respect the alignment and that the screws are properly tightened.





Electrical Installation Instructions

ARCTIC SPAS® MUST BE WIRED IN ACCORDANCE WITH ALL APPLICABLE LOCAL ELECTRICAL CODES. ALL ELECTRICAL WORK SHOULD BE DONE BY AN EXPERIENCED, LICENSED ELECTRICIAN AND APPROVED BY A LOCAL BUILDING / ELECTRICAL INSPECTION AUTHORITY. WE RECOMMEND THE USE OF APPROPRIATE ELECTRICAL CONDUIT, FITTINGS AND WIRE FOR ALL CIRCUITS. The spa can be wired with one 32 amp 230 volt single circuit, two 16 amp circuits or three 16 amp circuits (three phase).

We recommend an electrical subpanel containing appropriate RCD breaker is used to supply power and protect the spa. The grounding conductor must be at least the same gauge as the line conductors, but not less than 6 mm^2. A minimum 6 mm^2 solid copper bond wire is also required. Mount the subpanel in the vicinity of the spa, but not closer than 1.5m away, in accordance with all local codes. A qualified electrician must install the electrical circuit.

1. This hot tub must be permanently connected (hard-wired) to the power supply. No plug-in connections or extension cords are to be used in conjunction with the operation of this hot tub. Supplying power to the hot tub, which is not in accordance with these instructions, will void both the independent testing agency listing and the manufacturer's warranty.

2. The power supplied to this hot tub must be a dedicated circuit with no other appliances or lights sharing the power provided by the circuit.

3. Do not use aluminum wire.

4. The appliance should be supplied through a residual Current device (RDC) with a rated tripping current not exceeding 30mA.

5. To gain access to the hot tub's power terminal block, remove the four screws securing the two cabinet panels on the side of the spa containing the ETL label. Then open the door to the control box. (See diagram on previous page).

6. **IMPORTANT** To maintain TUV Ratings, A water resistant strain relief (rated IPx5 or better) must be used on the Power Supply Cable where it enters the pack. We recommend Heyco Liquid Tight Straight Through Fittings.

Note: For cables 12.4mm through 20mm Part # M4346
For cables 15.0mm through 25.4mm Part # M4348

7. Connect wires, color to color, on terminal blocks TB1. TIGHTEN SECURELY! All wires must be hooked up or damage could result.

8. Close the control box door and reinstall the cabinet side panels.

WARNING: Fill the spa with water before turning on the power.

Once your spa has been filled with water, turn it on and test all of the circuit breakers.
NOTE: If the RCD breaker trips immediately, verify that the BLUE neutral wire is connected into the load neutral in the breaker. Each breaker should be tested prior to each use. Here's how:

1. Push the "TEST" button on each RCD breaker, and observe it click OFF.
2. Push the breaker switch to the OFF position (to ensure that it has completely disengaged), then push the breaker switch to the ON position.

If any of the RCD breakers fails to operate in this manner, your spa may have an electrical malfunction, and you may be at risk of electrical shock. Turn off all circuits and do not use the spa until the problem has been corrected by an authorized service agent.

WARNING: Removing or bypassing any RCD breaker will result in an unsafe spa and will void the spa's warranty.

IMPORTANT: Should you ever find the need to move or relocate your Arctic Spa, it is essential that you understand and apply these installation requirements. Your Arctic Spa has been carefully engineered to provide maximum safety against electric shock. Remember, connecting the spa to an improperly wired circuit will negate many of its safety features.

Startup Procedures

IMPORTANT:
Your Arctic Spa has been thoroughly tested during the manufacturing process to ensure reliability and long-term customer satisfaction. Before filling the spa, wipe the spa shell clean with a soft rag.

The following instructions must be read and followed exactly to ensure a successful start-up or refill.

1) Ensure the electrical connections have been made in accordance with this manual and that the supply cable has not been damaged in any way.

2) Ensure all O-Rings have been installed into unions and unions have been tightened sufficiently.

3) Ensure all ball valves are open, and the drain has been closed.

4) Using a garden hose with a pre-filter, fill the spa with pre-filtered water to the bottom of the pillows (or approximately 6" / 15 cm above the base of the floating weir).

5) Once the spa is filled to the proper level, turn the power to the spa on, by turning on the RCD breaker in your panel. Watch the display on the topside control. After power-up, the display will blink until a key is pressed. This feature is to let you know that there was a power outage.

6) The jet pump, heating system and all internal plumbing will achieve a partial prime as the spa is filled. To check the operation of the jet system and to remove any remaining air from the plumbing system, follow these steps:

a) All Models: Push the Pump 1 button twice to turn the pump to high speed. Allow to run for 1 minute.

b) Signature, Ultra, and Legend series: Push Pump 2 button also. This pump runs at high speed only. Run for one minute.

c) Legend series only: Push Pump 3 button also. This pump runs at high speed only. Run for one minute.

Once the jet system is fully operational (as indicated by strong, non-surging jets), priming of the spa is complete. Push each Pump button once to turn the pumps off.

IMPORTANT: Weak or surging jets are an indication of a low water or a clogged filter cartridge.

CAUTION!

Do Not turn on power to the spa until the spa is filled to the required level. Running the spa pump without water could cause immediate damage and invalidate your warranty!

7) Adjust the chemicals and balance the water according to your dealer's instructions. A guideline is also included in this manual, under the Water Maintenance Section.

8) Set the temperature control to the desired temperature (between 38°C and 40°C or 100°F and 104°F), then place the insulated cover on the spa and allow

the water temperature to stabilize (approximately 16 hours). Make sure you secure the cover in place using the cover locks. Periodically check the spa water temperature. When the water temperature climbs above 29°C, proceed to the next step.

9) Test and Adjust Sanitizer level (Chlorine ideal 1 - 3 ppm or Bromine ideal 3 - 5 ppm).

10) Rotate Diverters to centre position and press "PUMP 2" button on topside control panel for 5 seconds to activate the "Boost filtration system", this will ensure sufficient circulation and filtration for entire jetting system. When enabled, "BOO" message is displayed.

11) You can set the temperature (between 38°C and 40°C, 100°F to 104°F) by pressing the TEMP (^) and TEMP (v) buttons on the control panel. The spa will normally come up to temperature within 16 to 24 hours. Replace the spa cover while the temperature is reaching the set point.

IMPORTANT: For safety, you can lock your desired temperature setting. Refer to the Topside Control Panel section for details.

Fusion™ Jetting System

With your Fusion™ Jetting System, you can control the massaging action of your spa. Using the Fusion™ diverter lever, the jets are activated in groups, known as jet systems. The jetting systems are selected by turning the diverter lever from one side to the other, or select both by leaving the diverter lever in the middle. The number of diverter levers you will have will depend on the model and series of Arctic Spa you have. Feel free to consult your local dealer with any questions regarding the function of this system, or just jump in and experiment for yourself.

Venturi Controls

The Venturi Controls allow you to control the intensity of the massage at each jet by adjusting the mixture of air and water. Simply turn the venturi control lever counter clockwise for a stronger flow and clockwise for a softer flow. Most jets are adjustable by turning the face of the jet clockwise for a stronger flow and counter-clockwise for a softer flow and eventually off.

Jets

Five Inch (5") Jets

The five-inch Hydromassage jets have four different nozzle options: Tri-face single pulse, Tri-face double pulse, Wave-face single pulse, and Wave-face double pulse. The Tri-face jets give a wide circular massage, while the Wave-face jets divide the water flow into varying streams and spinning patterns for a more customized circular massage. These jets are adjustable by turning the face of the jet clockwise for a stronger flow and counter-clockwise for a softer flow and eventually off.

Three Inch (3") Jets

The three-inch hydromassage jets have five nozzle options: The four above, plus directional jets. The Directional nozzle allows you to aim the water in the direction that feels best. The Tri-face jets give a wide circular massage, while the Wave-face jets divide the water flow into varying streams and spinning patterns for a more customized circular massage. The 3-inch jets are designed for a thorough massage of the muscles in your upper back, shoulders and neck. These jets are adjustable by turning the face of the jet clockwise for a stronger flow and counter-clockwise for a softer flow and eventually off.

Orca Jet

The Orca Jet is a large orifice hydromassage jet designed to maximize massaging action on a specific area of the body. It is located in the lower part of the spa to allow easy access for massaging feet, legs, hips and lower back. The intensity of the Orca Jet can be altered using one of the Fusion™ Diverter levers (the location varies depending on spa model). Consult your local dealer regarding which diverter lever or just jump in and experiment for yourself.

Therapy Air Pads *(Available on Designer, Ultra, Legend Extreme and Legend SE series only)*
When the Therapy Air System is turned on (see spa control functions), soft air bubbles all around you for an exhilarating massage.

Waterfall

The waterfall is turned on and off by means of a small diverter control. The location may vary depending on the model. (On select models only.)

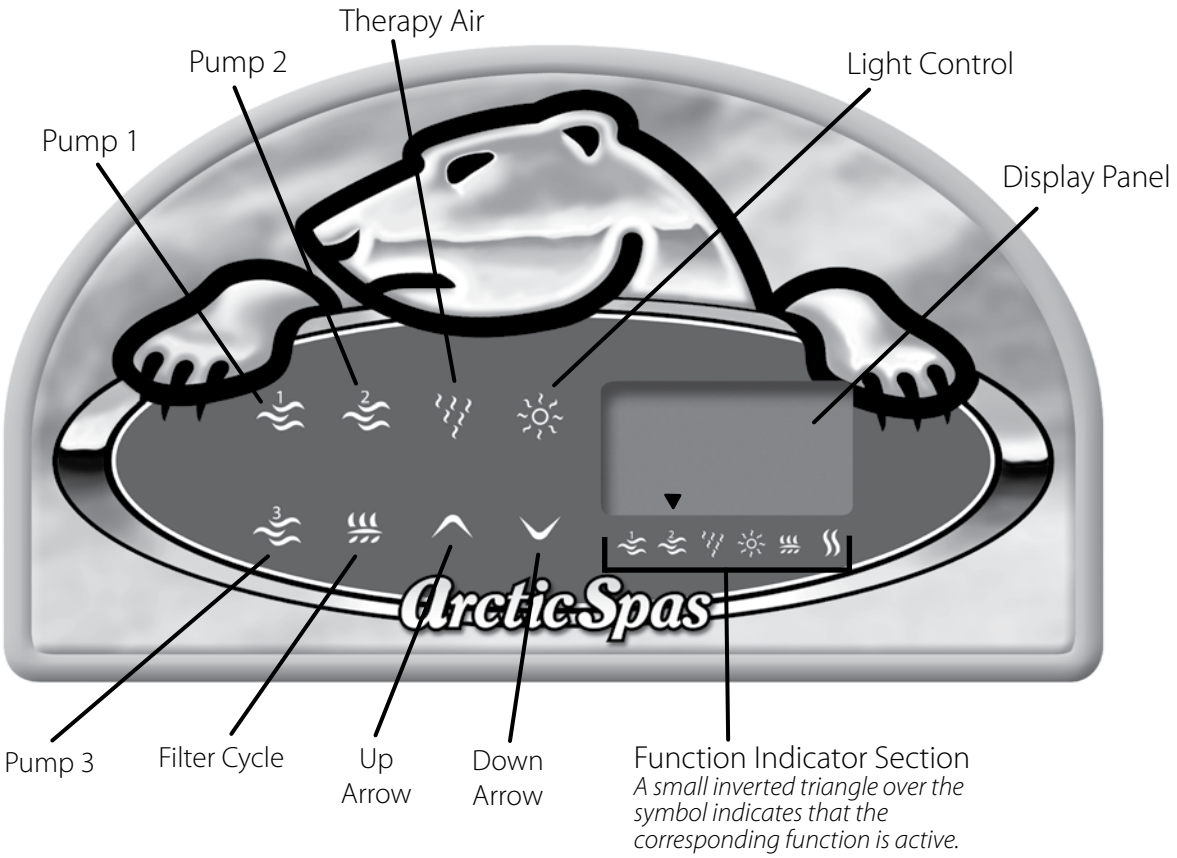
Topside Control Panel

Your spa control has been specifically designed so that by simply connecting the spa to a properly grounded source, and following the start-up procedures in this manual, the spa will automatically heat to the set temperature. Many other functions, such as filtration, safety checks and maintenance reminders have been automated so that your spa experience will be as carefree as possible.

But you're in charge! The topside control (TSC) panel allows you to set the temperature, initiate the filtration cycle, control the lights, and activate or deactivate the pump(s) and blower. The TSC display responds to let you know you have pressed a button, and that the selected function has been performed.

Power-Up Detection

After a power-up, on the first 10 seconds the display will alternate between the software number and revision, the display will then blink until somebody presses a key. This feature lets you know that a power failure has occurred and all settings have returned to default.



Panel Lock

It is possible to lock out all the keys. This feature is helpful when young children could have access to the keypad. **To lock/unlock the keypad, simply press on the Pump #1 key for at least 5 seconds.**

There are 2 keypad lock modes: the full lock, or the partial lock. The full lock, as the name implies, locks ALL keypad functions. The partial lock locks only the programming functions; the Pump, Blower, and Light keys remain useable.

To lock, press on the Pump #1 key for 5 seconds. At that point, "LocP" will be displayed. If the key is released at this time, keypad will be in partial lock. However, if lock key is kept pressed for another 5 seconds, "LocF" will appear and the keypad will be fully locked.

When the keypad is locked, all automatic functions of the system run as usual. However, when a locked key is pressed, an "LocP" or "LocF" message is displayed for 1 second. Also note that a power-up unlocks the keypad.

Invert Display

It is possible to set the display so that it is readable from either inside or outside the spa. To do this, just press on the Filter key for 5 sec to toggle between the inverted mode or not.

Temperature displayed in Fahrenheit or Celsius

The temperature can be displayed in Fahrenheit or Celsius. To toggle between those choices, press on the light key for five seconds.

Note that after a power-up the system always return to default Celsius display.

Boost Filtration mode

This mode is used to speed-up filtration after intensive use of the spa or to help mix chemical just added to the spa. Press the PUMP 2 key for 5 seconds to enable the Boost Filtration mode. In this mode, the Pump 2 will turn on high speed, and the ozonator will operate for 45 minutes. When enabled, 'BOO' message is displayed.

Clean filter reminder

This message is displayed every three months to remind you to replace the filter cartridge on the spa. The display will start blinking with the message 'CLE'. Press any key on the keypad to clear the message. Replace your disposable filter every three (3) months. (See Spa Maintenance section for more information.)

Temperature Control (Up & Down Arrows)

These keys are used to set the temperature of the water. As soon as you press one of these keys, the display will show the current set point and will keep showing it for 5 seconds after releasing the key. Pressing the keys will either increase or decrease the current set point. The Set Point logo on the display tells you if the display shows the current set point or the actual temperature of the water.

The water temperature can be adjusted in 1 degree increments from 15ºC to 40°C (59ºF to 104ºF). After a power down, the default set point is 39°C (102ºF).

Pump 1 Button

Press the Pump 1 key to turn Pump 1 on at low speed. A second press will change Pump 1 to high speed. A third press will turn Pump 1 off. Note: You may not be able to shut Pump 1 off if in a filter or heating cycle. A built-in timer will shut Pump 1 off 20 minutes after it has been started, unless it has been manually shut off. The Pump 1 ON triangular icon will appear solid on the display when Pump 1 is running at high speed. It will flash when Pump 1 is running at low speed.

Note: Pushing and holding the Pump 1 button will lock the panel. See the section "Panel Lock" for details.

Pump 2 Button *(Optional)*

Press the Pump 2 key to turn Pump 2 on High speed. A second press turns Pump 2 off. If Pump 2 is left on, it will automatically shut off 20 minutes after it has been started, unless it has been manually shut off.

The Pump 2 ON triangle icon will appear solid on the display when Pump 2 is running at high speed.

Pump 3 (On/Off Button) *(Optional)*

Press the Pump 3 key to turn Pump 3 on High speed. A second press will turn Pump 3 off. If Pump 3 is left on, it will automatically shut off 20 minutes after it has been started, unless it has been manually shut off.

Note: A long press (5 seconds) on Pump 3 key puts the system on standby. In Standby mode, the display shows "OFF" for at least 10 seconds and all outputs are turned off for 30 minutes. All keys are disabled except the On/Off key. A second long press (5 seconds) will restart the system before the 30 minutes ends.

When power is first applied to the spa, it is "On" by default.

Therapy Air Button *(Optional)*

Press the Therapy Air key to turn Therapy Air on. A second press will turn Therapy Air off. If Therapy Air is left on, it will automatically shut off 20 minutes after it has been started.

The Therapy air ON triangle icon will appear solid on the display when Therapy air is on.

Light Button

Press the light button to toggle the light(s) on and off. If the lights are left on, they will automatically shut off 2 hours after it has been started. If the spa is equipped with Northern Lights™, or Northern Lights™ Deluxe, the different lighting sequences can be cycled by pressing the light key on and off repeatedly.

The light ON triangle icon will appear solid on the display when the light is on.

To Program the Duration of the Filtration Cycles:

The system will automatically perform four filtration cycles per day, 6 hours apart. During a cycle, the following sequence is executed:

* Pump 2, Pump 3 (on 3 pump systems) and Blower start at high speed for 1 minute
* Pump 1 then starts and runs at low speed for the preset number of hours
* Ozone output is turned on (optional)

To set the duration of the filtration cycles (the amount of time Pump 1 will be on), follow this procedure:

Press on the Filter Cycle key. The display will show Fd XX where XX represents the number of hours Pump 1 will be operating at low speed.

Use the Up & Down arrow keys to change the number of hours.
00 = no filtration
01 = 1 hour/cycle
02 = 2 hour/cycle

Press the filter cycle key again to display the number of cycles (FF) in a 24 hour period. You can select from 1 cycle to 4 cycles per day. The Filter Cycle triangular icon will appear on the display when a filter cycle is on.

Overtemp During Filter Cycle

In order to prevent excessive water temperatures due to long Filter cycles during warm weather, the system has a special safeguard.

If the water temperature exceeds the set point by more that 1°C, the system will cancel the Filter cycle and the Filter cycle icon will blink for the remainder of the filter cycle. The Filter cycle icon blink pattern will be: ON for 1/2 second, OFF for 1/2 second, ON for 1/2 second, and then finally OFF for 1 1/2 seconds. This sequence will then repeat. The filtration cycle will automatically reset itself once the water temperature falls below the setpoint.

Filter Cycle Suspension

During a Filter cycle, if an accessory (a pump, the blower, or the light) is used manually, the Filter cycle is suspended for the time the accessories are in use. Once all accessories are turned off (whether manually or by the built-in timer), the Filter cycle remains suspended for an extra 40 minutes. When a Filter cycle is suspended, the Filter cycle icon will blink.

Spa Care and Maintenance

Your Arctic Spa is manufactured from the highest quality, most durable materials available. Even so, the spa care and maintenance program you develop will ultimately determine how long your spa and its individual components will last. Regular maintenance following the advice in this section will help you to protect your investment.

IMPORTANT: Before performing any maintenance on your spa, make a visual inspection of the spa to get an understanding of what condition it may be in and if anything looks out of the ordinary. If any part appears to be damaged, loose or missing, do not proceed. Contact your Factory Authorized Dealer immediately.

Draining the Water

Detergent residues and dissolved solids from bathing suits and chemicals will gradually accumulate in your spa's water. Normally, in about three to four months the water will become difficult to balance and should be replaced. Showering without using soap prior to entering the spa or using only the rinse cycle when laundering your bathing suit will help to reduce detergent residue in the spa water. However, foam problems are more likely to be caused by a build up of organic pollutants in the spa-mostly by body oils. If you're using your spa frequently with a high bather load the water will need to be replaced more often. Spa water gradually loses quality because of build ups of unfilterable pollutants.

IMPORTANT: Remember to change your water every three to four months.

To Drain Your Spa:

1. Shut off the RCD breaker located in the subpanel or the quick disconnect.
2. Locate the main drain valve for the spa, on the outside of the cabinet to the right of the equipment compartment. Attach the male threaded end of a garden hose to the drain valve, and route the other end of the hose to an appropriate draining area.
3. Open the valve by turning the large outside ring counterclockwise. The spa will drain by gravitational flow.
   Note: All Arctic Spas® models will drain through the floor drain. Equipment such as the pump(s) and heater will drain. All models will leave a small amount of water in the footwell. Any water remaining in the plumbing or equipment after draining will only need to be removed if the spa is being winterized.
4. When empty, inspect the spa shell and clean as required.
5. Close the drain valve.
6. Refill the spa BEFORE restoring power.

IMPORTANT: With reusable filters, it is necessary to rinse the filter cartridges weekly. Every month, and each time the spa is drained for cleaning, clean the cartridges in filter cleaner . (With Arctic Spas® disposable filters, simply replace the cartridge whenever the spa is drained, or about every three months).

Filtration System

Important: The use of Clarifiers and Foam inhibitors is not recommended with Arctic Pure® Disposable filters!

Arctic Spas® are equipped with balanced filtration, meaning that the filter cartridges are sized to meet the needs of the pump system.

As with any water filtering system, the filter cartridge may become clogged, resulting in reduced water flow. It is important to maintain a clean, unobstructed filter system. We recommend that your filter cartridge be replaced with a Arctic Pure® disposable filter cartridge every three (3) months.

Filter Cartridge Removal and Installation

1. Put the spa in Standby mode using the on/off button (Pump 3 button on 3 pump systems) on the topside control panel.
2. Remove the filter basket by rotating the top outside ring counterclockwise and lifting.
3. Remove the filter cartridge.
4. Clean any debris out of the skimmer basket.
5. To reinstall the filter cartridge, reverse the order of steps in which it was removed.

Care of Spa Pillows

The spa pillows used in many of the Arctic Spas® models will provide years of comfort if treated with care. They have been positioned above the water level to minimize the bleaching effects of chlorinated water and other spa water chemicals. To extend their life, whenever the spa shell is being cleaned, the spa pillows should be removed and cleaned. Body oils can be removed with a mild soap and water solution. ALWAYS rinse off the spa pillows thoroughly to remove any soap residue. The pillows can be conditioned with Arctic Pure® Cover Renew cleaner after cleaning. If the spa is not going to be used for a long period of time (that is, during a vacation or if the spa is being winterized), or when the spa water is being super-chlorinated, the spa pillows should be removed until the next use of the spa.

To remove and replace the spa pillows:

1. Carefully slide the pillow up and away from the spa shell.
   IMPORTANT: Just pulling the pillow straight out of the shell recess will damage the pillow. This is not covered under warranty.
2. To reinstall the spa pillow, carefully slide the pillow down into the spa pillow recess.

Care of the Spa Shell

Your Arctic Spa has a fibreglass reinforced, Lucite® cast acrylic shell. Stains and dirt generally will not adhere to your spa's surface. A soft cloth or sponge should easily remove most dirt. Most household chemicals are harmful to your spa's shell.

Sodium bicarbonate (baking soda) or vinegar can be used for minor surface cleaning. Always thoroughly rinse off any spa shell cleaning agent with fresh water.

Service Notes:

1. Iron and copper in the water can stain the spa shell if allowed to go unchecked. Your Arctic Spas® Dealer stocks Arctic Pure® Best Defence to use if your spa water has a high concentration of dissolvedminerals.
2. The use of alcohol or any household cleaners other than those listed to clean the spa shell surface is NOT recommended. DO NOT use any cleaning products containing abrasives or solvents since they may damage the shell surface. Damage to the shell by the use of harsh chemicals is not covered under the warranty.

MANUAL SAFETY COVER

WARNING
AVOID DROWNING RISK
KEEP CHILDREN AWAY. CHILDREN OR OBJECTS CANNOT BE SEEN UNDER COVER.
REMOVE COVER COMPLETELY BEFORE ENTRY - BATHERS ENTRAPMENT POSSIBLE.
NON-SECURED OR IMPROPERLY SECURED COVERS ARE A HAZARD.
FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN INJURY OR DROWNING.
AVERTISSEMENT
ÊVITEZ DE NOYER LE RISQUE
ENFANTS DE SUBSISTANCE PARTIS. DES ENFANTS OU LES OBJETS NE PEUVENT PAS ÊTRE VUS SOUS LA COUVERTURE.
ENLEVEZ LA COUVERTURE COMPLÊTEMENT AVANT L'BAIGNEUR - OCCLUSION D'ENTREE POSSIBLE.
LES COUVERTURES NON-FIXÊES OU INCORRECTEMENT FIXÊES SONT UN RISQUE.
LE MANQUEDE SUIVRE TOUTES LES INSTRUCTIONS PEUT AVOIR COMME CONSÊQUENCE LES DOMMAGES OU LA NOYADE.

Care of the Spa Cover

WARNING: The cover is a manual safety cover that meets or exceeds all prevailing requirements of ASTM Standards for spa safety covers when installed and used correctly as of the date of manufacture. Non-secured or improperly secured covers are a hazard. Open the cover to its fully open position before use. Be sure to inspect the cover for premature wear or deterioration. Over time, with use, there is a chance of normal cover wear and deterioration. To properly maintain your cover see directions below.

Vinyl Cover

The vinyl spa cover is an attractive, durable foam insulation product. Monthly cleaning and conditioning is recommended to maintain its beauty.

To clean and condition the vinyl cover:

1. Remove the cover from the spa and gently lean it against a wall or fence.
2. With a garden hose, spray the cover to loosen and rinse away dirt or debris.
3. Using a large sponge and/or a soft bristle brush, and using a very mild soap solution or baking soda, scrub the vinyl top in a circular motion. Do not let the vinyl dry with a soap film on it before it can be rinsed clean.
4. Scrub the cover's perimeter and side flaps. Rinse clean with water.
5. Rinse off the underside of the cover with water only (use no soap), and wipe it clean with a dry rag.
6. To condition the cover after cleaning, apply a thin film of Arctic Pure® Cover Renew to the vinyl surface and buff.

Care of the Spa Cabinet

Cedar Cabinet: When properly cared for, the wood cabinet of your spa will maintain its beauty for many years. Your Arctic Spa cabinet has been specially treated with Olympic Maximum Wood Stain. Use this stain or a similar product on a regular basis to protect the wood of the cabinet and keep your spa looking good.

LED Light Replacement

All Arctic Spas® come equipped with two 12 volt blue LED underwater lights for night use. The Northern Lights™ option uses two multicoloured LED assemblies. The Northern Lights™ Deluxe option comes with five lights. Should you need to change any light, follow these simple steps:

1. Make sure the lighting is turned off, by checking the topside be sure the light icon is not showing.
2. Remove the screws securing the equipment access doors; remove the doors.
3. Locate the reflector, which is secured into the light housing. Carefully rotate the reflector counter-clockwise until it comes off the light housing.
4. Carefully disconnect any cables (note the location of the cable(s), as the LED assembly has two sockets) and remove the light assembly from its socket or slot.
5. Install the new LED assembly in its slot or socket, then reconnect the cables.
6. To reinstall the underwater light, rotate the lamp assembly clockwise onto the light housing until secure.

Vacation Care Instructions

If you plan to be away from home for 7 - 14 days, follow these instructions to ensure that the water quality of your spa is maintained.

1. Adjust pH as needed.
2. Ensure you have sufficient sanitizer to last until you return.
3. Shock the spa with Arctic Pure® Spa Boost or Refresh.
4. Lower the temperature.

Upon your return:

1. Shock the spa with Arctic Pure® Spa Boost or Refresh.
2. Ensure you have sufficient sanitizer for regular use.
3. Return the temperature to its original setting. You can use your spa once the residual sanitizer level falls within the ideal range.

Note: If you will not be using your spa for more then 14 days and a neighbor, friend or an outside maintenance service is not available to check and balance the water chemistry, draining or winterizing (for winter only) the spa is recommended.

Winterizing Your Spa

If you plan to leave your spa unused for a long period of time in severely cold weather, you should drain the spa to avoid accidental freezing due to a power or equipment failure.

We recommend your local authorized dealer winterize your spa. Freezing can severely damage your spa. Improper winterizing of your spa can void your warranty.

Arctic Spa Stereo *(Optional)*

For instructions or troubleshooting of your stereo and related equipment, please see the Owners Manual that comes with the stereo.

Water Maintenance

It's important to have clean water. Water maintenance is one of the least understood, but very important areas of spa ownership. Your dealer can guide you through the process of achieving and maintaining perfect water in your spa, given your local conditions. Your program will depend on your water's mineral content, how often you use your spa, and how many people use it. Here is our suggested step-by-step program:

General Information

There are three fundamental areas of water maintenance. They are (1) Water Filtration, (2) Water Sanitation, and (3) Chemical Balance/pH Control.

Before you even begin it is highly recommended to use the pre-filter when filling your spa, because tap water is not really pure water. By starting with water that is already filtered clean you will find that you have much fewer problems maintaining crystal clear water.
Although your spa's filter system is working several hours a day to remove particles from your water, it does not remove bacteria or viruses. Water sanitation is the responsibility of the spa owner. It can be achieved through the regular and periodic (daily, if necessary) addition of an approved sanitizer. The sanitizer will chemically control the bacteria and viruses present in the spa water. Bacteria and viruses can grow quickly in undersanitized spa water. The water's chemical balance and pH control are also the responsibility of the spa owner. You will have to add chemicals to maintain proper levels of Total Alkalinity (TA) and pH. Proper water balance and pH control will minimize scale buildup and corrosion of metals, extend the life of the spa, and allow the
sanitizer to work at maximum efficiency.

Methods For Testing The Spa Water

Accurate water testing and analysis are an important part of effectively maintaining your spa water. To follow the Arctic Spas® recommended program, you must have the ability to test for:

- Total Alkalinity (TA)
- pH
- Sanitizer

Although reagent liquid test kits provide the highest level of accuracy, Test Strips are the most convenient testing method used by many spa owners. Keep in mind that test strips are susceptible to heat and moisture contamination, which will result in inaccurate readings.

IMPORTANT: Always read and carefully follow the directions included with the Test Kit or Test Strips to ensure the accuracy of the test results.

Hints For Successful Water Testing

When using the reagent test kit:

- Always take water samples 30-45 cm (12" - 18") below the water surface.

- Rinse the test cells before and after each use.
- Do not dispose of test samples into the spa water.
- When adding drops of chemicals from the kit (the reagents) into the test block, hold the bottle vertically and add the drops slowly to be sure the correct quantity is used.
- The reagents should be replaced on a yearly basis to maintain the accuracy of the test results.

Basic Chemical Safety

When using chemicals, read the labels carefully and follow directions precisely. Though chemicals protect you and your spa when used correctly, they can be hazardous in concentrated form. Always observe the following guidelines:

- ALWAYS KEEP CHEMICALS OUT OF CHILDREN'S REACH.
- NEVER MIX CONCENTRATED CHEMICALS TOGETHER.
- ALWAYS THOROUGHLY RINSE ANY CONTAINER USED TO MIX CHEMICALS AFTER USE.
- ALWAYS RINSE OUT ANY EMPTY CHEMICAL STORAGE CONTAINER BEFORE DISPOSAL.
- Accurately measure the quantities specified. Do not overdose your spa. Amount required will vary depending on water condition, quantities to be used are only guidelines.
- Store chemicals in a cool, dry, well ventilated place.
- Always keep chemical containers closed when not in use.
- Don't inhale fumes or allow chemicals to come in contact with your eyes, nose, or mouth. Wash your hands immediately after use.
- Follow the emergency advice on the product label in case of accidental contact.
- Never smoke around chemicals. Some fumes can be highly flammable.
- Don't store any chemicals in the spa equipment compartment.

Adding Chemicals to the Spa

Most chemicals (does not include any slow dissolving chemicals) can be added directly to the spa while the pump(s) is running on high speed, for a minimum of 10 minutes.

IMPORTANT WHEN USING ARCTIC PURE® BOOST OR REFRESH TREATMENT

NOTE: After administering a super chlorination treatment or non-chlorine shock to your spa, leave the cover open for a minimum of 20 minutes to allow the oxidizer gas to vent. A high concentration of trapped oxidizer gas which may exist as a result of the shock treatment (not daily sanitation) may eventually cause discoloration or vinyl degradation to the bottom of the cover. This type of damage is considered chemical abuse and is not covered under warranty.

The Arctic Pure® Water Maintenance Program

Following the Arctic Pure® water maintenance program will save you time and frustration and ensure clear, clean spa water.

Remove Excess Minerals

Most tap water has minerals such as Calcium, Copper, Iron, Manganese and Sodium in it, and the

circulation of water can cause the erosion of metals from spa equipment which can present possible scaling and staining problems in your spa. To remove these simply fill your spa with the Pre-Filter. In extreme cases of source water with high minerals (such as some well water):

1. We recommend you add 3 1/2 tablespoons (48 grams) of Arctic Pure® Best Defense per 1000 litres (265 gallons) of water while filling your spa.
2. Also, as water evaporates from your spa and new water is added, the amount of dissolved minerals will increase. The spa water may eventually become "hard" (Calcium Hardness too high) enough to damage the heater by calcifying its surface. To protect against these problems add 1 tablespoon (14 grams) per 1000 litres (265 gallons) of Arctic Pure® Best Defense weekly.

Balance the Total Alkalinity (TA)

1. The recommended Total Alkalinity (TA) for your spa water is 125-150 ppm.
2. Total Alkalinity is a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA is referred to as the water's "pH buffer". In other words, it's a measure of the ability of the water to resist changes in pH level.
3. If the TA is too low, the pH level will fluctuate widely from high to low. Fluctuations in pH can cause corrosion or scaling of the spa components. Low TA can be corrected by adding Arctic Pure™ Perfect Balance.
4. If the Total Alkalinity is too high, the pH level will tend to be high and may be difficult to bring down. The pH can be lowered by using Arctic Pure® Adjust Down.
5. Once the TA is balanced, it normally remains stable, although some sanitizers, and the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.
6. When the Total Alkalinity is within the recommended range, proceed to the next step.

Balancing the pH

1. We recommended a slightly higher pH range for your spa water; 7.2-7.6.
2. The pH level is the measure of acidity and alkalinity. Values above 7 are alkaline; those below 7 are acidic. Maintaining the proper pH level is extremely important for:
   - Optimizing the effectiveness of the sanitizer.
   - Maintaining water that is comfortable for the user.
   - Preventing equipment deterioration.
3. If the spa water's pH level is too low, the following may result:
   - The sanitizer will dissipate rapidly.
   - The water may become irritating to spa users.
   - The spa's equipment may corrode.

   If the pH is too low, it can be increased by adding Arctic Pure® Adjust Up to the spa water.

4. If the pH level is too high, the following may result:
   - The sanitizer is less effective.
   - Scale will form on the spa shell surface and the equipment.
   - The water may become cloudy.

If the pH is too high, it can be decreased by adding Arctic Pure® Adjust Down to the spa water.

5. It is important to check the pH on a regular basis. The pH will be affected by the bather load, the addition of new water, the addition of various chemicals, and the type of sanitizer used.
6. When the pH is within the recommended range, proceed to the final step.

Calcium Hardness (CH)

1. Most spa manufacturers recommend a Calcium Hardness (CH) level for your spa of 150-200 ppm. However, we do not recommend adding calcium to your spa if your spa water is above 100 PPM, or if your incoming water has a very low level of calcium hardness.
2. Calcium Hardness is a measure of the total amount of dissolved calcium in the water. It is believed that calcium helps control the corrosive nature of water. Calcium has a tendency to precipitate (fall out of suspension) in high temperatures and high pH levels.
   Warning: When calcium falls out of suspension it can collect on the heater and pump, and shorten their life.
3. Any natural corrosiveness in the water can be combatted by maintaining a slightly higher Total Alkalinity Level.

Sanitize the Spa

Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms from growing in the spa. At the same time, you don't want too high a sanitizer level, or it can irritate your skin, lungs and eyes.

1. Always maintain the sanitizer level in your spa at the recommended level for each type of sanitizer.
2. We recommend the following sanitizers:
   Chlorine System:
   - Arctic Pure® Chlorine Tablets
   - Arctic Pure® Refresh
   - Arctic Pure® Spa Boost

   Bromine System:
   - Arctic Pure® Brominating Tablets
   - Arctic Pure® Refresh
   - Arctic Pure® Peak Boost

Important: Sanitizers are acidic and will decrease the Total Alkalinity. Regular testing and balancing of TA is extremely important with these products.

Important: Always remove the floating dispenser while the spa is in use. Remove dispensers with a plastic bucket (keeping submerged) and store out of reach of children until spa use has ended.

Using Chlorine System

CAUTION: The use of personal protective equipment (rubber/latex/vinyl gloves, eye protection) is recommended while handling the dispenser or the pucks.

Start-up:

1. Add pucks to floating dispenser and open to setting 4.
2. Add 2 tablespoons (28 grams) of Arctic Pure® Refresh per 1000 litres (265 gallons) of water.
3. Add 1 tablespoon (14 grams) of Arctic Pure® SpaBoost per 1000 litres (265 gallons) of water.
4. Test the Chlorine level. Once the chlorine reads within the ideal range (1-3 ppm) turn tablet dispenser down to 1 - 2 (more or less according to bather load).
5. Start the Boost Filtration mode to circulate the chemicals and do not use spa for two hours after the mode ends.

Note: The above example is for a spa without an ozone system. If your spa is equipped with an ozone system please contact your dealer for proper Chlorine levels.

Weekly:

1. Add pucks to floating dispenser and reset the setting if necessary.
2. Add 2 tablespoons (28 grams) of Arctic Pure® Refresh per 1000 litres (265 gallons) of water.
3. Wait at least one hour and add 1 tablespoon (14 grams) of Arctic Pure® Best Defence per 1000 litres (265 gallons) of water.

Important: Arctic Pure® Refresh significantly reduces pH and TA. One hour after adding Arctic Pure® Refresh test and adjust TA and pH as needed.

Bromine System:

Note: If you are planning to use your new spa right away, Peak Boost must be added first. Follow directions for adding Peak Boost from this page.

1. Fill floating dispenser with pucks and open to setting 7.
2. Add 2 tablespoons (28 grams) of Arctic Pure® Refresh per 1000 litres (265 gallons) of water.
3. Add 2 1/2 tablespoons (35 grams) of Arctic Pure® Peak Boost per 1000 litres (265 gallons) of water, to establish a Bromide reserve.
4. Test the Bromine level. Once bromine reads within the ideal range (3-5 ppm) turn tablet dispenser down to 2 or 3 (more or less according to bather load).

Note: The above example is for a spa without an ozone system. If your spa is equipped with an ozone system please contact your dealer for proper Bromine levels.

Weekly

1. Twice a week test and adjust Total Alkalinity, pH and Chlorine or Bromine levels.

In extreme cases of sources water with high minerals (such as some well water), add 1 tablespoon (14 grams) per 1000 litres (265 gallons) of Arctic Pure® Best Defence weekly.

Important: Arctic Pure® Refresh significantly reduces pH and TA. One hour after adding Arctic Pure® Refresh test and adjust TA and pH as needed.

The use of Clarifiers and Foam inhibitors is not recommended with Arctic Pure® Disposable filters!

Common Spa Water Problems~Cause & Remedy

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
CLOUDY WATER	A. Poor Filtration	A. Dirty filter, clean with Arctic Pure® Filter Restore (not with disposable filter). Increase Filter cycle.
	B. Suspended particles	B. Add Arctic Pure® Easy Clear
	C. Organic contaminants build up	C. Shock treatment with Arctic Pure® Refresh
	D. pH high	D. Add Arctic Pure® Adjust Down until level reads 7.2-7.6
	E. Total alkalinity high	E. Add Arctic Pure® Adjust Down to adjust TA level to 100-130ppm
	F. Combined chlorine in the water	F. Shock treatment until combined chlorine is eliminated (see container instructions)
	G. High dissolved solids	G. Empty spa and refill
	H. Hardness too high	H. Add Arctic Pure® Best Defence until level reads 15-280ppm
COLOURED WATER	A. Dissolved metals from water source	A. Use Arctic Pure® Best Defence and have your dealer check your water balance
	B. Low chlorine/bromine levels	B. Arctic Pure® Boost treatment and test chlorine/ bromine levels
	C. Fragrance	C. Stop the use of fragrance
FOAMING	A. High concentration of oils and organics being agitated by the jets	A. Squirt Foam Dissolve™ on foam. Refer to pg 20 for more information. (not with disposable filter)
SCALE DEPOSITS	A. High Calcium level, high pH, high alkalinity	A. Drain partially, add Arctic Pure® Best Defence, cor rect pH level to 7.2 - 7.6 and alkalinity to 100-130 ppm. It is also recommended you take a sample of water into your nearest Arctic Spa dealer for more assistance with this problem.
ODOR	A. High level of organic contaminants, combined with chlorine	A. Check pH and adjust as required. B. Shock with Arctic Pure® Refresh, add sanitizers C. Dilution of water will reduce contaminants and odor. D. Check any ozone system is operational
EYE/SKIN IRRITATION	A. pH too low B. Combined chlorine due to high concentration of organic contaminants C. Allergic reaction to sanitizer D. Bacterial contamination	A. Add Arctic Pure® Adjust Up until level reads 7.2 - 7.6ppm B. Add Arctic Pure® Refresh, add sanitizers. C. Change from Bromine to Chlorine or vice versa. D. Drain and refill spa.
NO CHLORINE/ BROMINE READING	A. High concentration of contaminants using up sanitizers	A. Add sanitizers until levels are up to the recommended levels
	B. Test kit reagents ineffective	B. Replace test kits at least once a year C. Chlorine/Bromine level very high and is bleaching test reagent, dilute sample 50:50 with fresh water retest and double the result. D. Possible bacterial contamination, have water tested by a lab.

Troubleshooting Spa Problems

1. **Nothing functions:** The RCD Breaker has tripped or there is a power failure. Test RCD Breaker. Turn breaker back on and see if spa powers up, if not contact your factory authorized dealer.

2. **Spa does not heat:** Check to see if the heat indicator is on or there are any error messages on the topside control panel. If the heat indicator is on and no error message appears contact your factory authorized dealer.

3. **Poor Jet Pressure:** First check to see that the jet(s) are turned on fully. Check your filter to see if it's clogged or dirty. Next, check to see if the jet(s) are obstructed or if the venturi air dial is turned on. Finally, check to see if the jet(s) are surging. If so, your pump is cavitating (sucking in air). This usually occurs when the water level is too low and can be solved by adding water to the spa. If the problem still persists, contact your factory authorized dealer.

4. **Light is not functioning:** Follow the LED replacement section.

5. **Spa comes on by itself:** This function is normal when heating and filtering. No action required.

6. **Jet(s) are not spinning:** Remove jet barrel by turning the jet counterclockwise until it pops out. Then irrigate the jet in the water (this will help remove any foreign particles that may be lodged in the bearings). If the jet(s) are still not spinning, it may be calcified. Try soaking the jet(s) in vinegar (be sure to immerse the bearings) for ten minutes. Then irrigate the jet(s) again and re-install. If problem persists contact your factory authorized dealer.

7. **Spa doesn't drain completely:** The spa is drained by gravity. It will not always drain fully. It is not necessary to drain the spa in its entirety except when winterizing the spa. If you wish to remove the last little bit of water, we recommend you vacuum it out with a wet/dry vacuum.

Important

This manual and its contents are subject to change without notice. Although Blue Falls Manufacturing has prepared this manual as accurately and precisely as possible, Blue Falls Manufacturing will not be liable for loss, injury or damages caused by improper servicing or by use of spa (improper or otherwise).

Arctic Spas® are Canadian built with the finest materials and advanced technology to withstand the harshest weather conditions. Performance and Reliability is the Arctic Spas® Customer Guarantee. If your spa cannot be repaired under our extensive warranty, Arctic Spas® will provide a replacement spa equal in value to the original purchase price of the defective spa. Our philosophy Guarantees you Customer Satisfaction. These are words we will stand behind in writing.

engineered for the world's harshest climates...

(wherever you happen to live)

www.arcticspas.com